

### **REMARKS**

Claim 26 is indicated as allowable. Claims 1-25 and 27-31 have been rejected as anticipated by Bohannan (US 4,956,999). Bohannan discloses a method for testing the response of a structure to a transient input. The response of the structure to the transient input indicates the condition of the structure. The response of the structure is unknown and is being measured.

Claim 1 has been amended for clarification. In Bohannan there is no estimation model that indicates “a relationship between at least one input state parameter and at least one mode amplitude,” as recited by claim 1. Nor does Bohanan “obtain a signal portion from at least one mode amplitude and at least one respective mode shape,” as recited by claim 1. Bohannan does not “construct the signal” as claimed. Instead, the signal is measured and it is the relationship between the transient input and the response signal that is evaluated.

Bohannan does not disclose a feature estimation model that maps relationships between the at least one state parameter and at least one variable feature, as recited by claim 9. Again, instead, Bohannan measures a response by the structure to the transient input. Bohannan does not construct an estimated signal from at least one estimated variable feature and at least one fixed feature. Instead, Bohannan measures the output signal and determines a relationship between the input and the output to determine the condition of the structure.

Bohannan does not construct a model that synthesizes an estimated signal from at least one variable feature obtained using a feature estimation model and at least one fixed feature, as recited by claim 19. Instead, Bohannan simply measures the response of a structure to a transient input.

Bohannan does not disclose, “construct[ing] an estimated load signal from ... at least one mode amplitude and at least one mode shape taken from [a] mode shape library.” Bohannan does not construct an estimated load signal. Bohannan simply measures a response of a structure to a transient input to determine the condition of the structure.

The Commissioner is authorized to charge Deposit Account No. 19-2189 in the name of Sikorsky Aircraft Corporation for any extensions of time or additional fees and credit any overpayments.

Respectfully Submitted,

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